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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,903	01/16/2004	Brad D. Tidwell	710101.1380	7078
24504 7590 01/03/2008 THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP 600 GALLERIA PARKWAY, S.E. STE 1500 ATLANTA, GA 30339-5994			EXAMINER RUTKOWSKI, JEFFREY M	
			ART UNIT 2619	PAPER NUMBER
			MAIL DATE 01/03/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/758,903

Applicant(s)

TIDWELL ET AL.

Examiner

Jeffrey M. Rutkowski

Art Unit

2619

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 12-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 12-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim 11 has been cancelled.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. **Claims 1-3, 7-8, 13, 17-18, 21 and 24-27** are rejected under 35 U.S.C. 103(a) as being unpatentable over Delvaux (US Pat 6,775,305) in view of Daruwalla et al. (US Pat 7,058,007), hereinafter referred to as Daruwalla.

4. For **claims 1, 7-8, 13, 17-18, 21 and 24-27**, Delvaux teaches two types of High Speed Digital Subscriber Line (HDSL) architectures. The first type of HDSL architecture uses a two twisted copper wire pairs to provide T-1 capacity service of 1.54 Mbps. A European version of the HDSL architecture uses three twisted copper wire pairs with respective transceivers, multiplexers and demultiplexers to provide E-1 capacity service of 2.048 Mbps [col. 4 lines 54-64]. Since the T-1 service requires one less transceiver than the E-1 service, Delvaux's teaching

suggests a spare transceiver can be obtained by using the European three transceiver set to provide T-1 capacity service. For HDSL transmission, a mapper (logic) is used to transmit a portion of a data stream over one copper pair, while a second portion of the data stream is transmitted over a second copper pair. For HDSL reception, a mapper is used to reconstruct the original data stream [col. 5 lines 35-55].

5. Delvaux does not teach a 1:N protection scheme. Daruwalla teaches the 1:N protection limitation absent from the teachings of Delvaux by disclosing a Cable Modem Termination System (CMTS) architecture (high speed architecture) where one working machine provides protection for all of the other machines [col. 6 lines 24-27]. A path switch occurs when a component in the CMTS architecture is detected to have failed [col. 13 lines 10-15]. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use a 1:N protection scheme in Delvaux's invention to avoid having a single point of failure in the network [Daruwalla, col. 5 lines 45-60].

6. For **claims 2 and 3**, Delvaux teaches the transceivers are located in a Central Office (CO) 20 and a Customer Premises (CP) 40 [figure 2].

7. **Claims 4, 9, 14, 19 and 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over Delvaux in view of Daruwalla, as applied to **claim 1** above, and further in view of Doll et al. (US Pat 5,694,398), hereinafter known as Doll.

8. For **claims 4, 9, 14, 19 and 22**, the combination of Delvaux and Daruwalla do not teach the use of transformers. Doll teaches transformers LTx are used in Network Termination (NT) equipment [figure 2]. Phantom connections from taps on the subscriber side of the transformers

are used to supply subscriber terminals [**col. 4 lines 27-46 and figure 2**] (a transformer coupled to the third transceiver, the transformer having a pair of taps coupled to the third subscriber line). Figure 2 also shows a DC power source is used to supply a voltage across transformer taps. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use transformers in Delvaux's invention to supply operational voltage to subscriber equipment.

9. **Claims 5, 12 and 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over Delvaux in view of Daruwalla, as applied to **claim 1** above, and further in view of Renucci et al. (US Pat 6,996,134), hereinafter known as Renucci.

10. For **claims 5, 12 and 15**, the combination of Delvaux and Daruwalla do not teach the use of a control element or a Direct Current (DC) power source. Renucci teaches the DC power source limitation absent from the teachings of the combination of Delvaux and Daruwalla by disclosing a power conditioner **64** injects Direct Current (DC) power into the modulated signal to provide power to customer equipment [**col. 5 lines 52-55**]. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use a DC power source in Delvaux's invention to make sure customers will still have phone service during a power outage at the customer location.

11. Renucci also teaches the control element limitation absent from the teachings of the combination of Delvaux and Daruwalla by disclosing bypass relays **82** are used to switch subscriber lines **84A, 84B** from a processing module **78** to AML modulator/demodulator **76** [**col. 9 lines 5-10 and figure 5**]. It would have been obvious to a person of ordinary skill in the art at

the time of the invention to use bypass relays in Delvaux's invention to implement a 1:N protection scheme in hardware.

12. **Claims 6, 10, 16, 20 and 23**, are rejected under 35 U.S.C. 103(a) as being unpatentable over Delvaux in view of Daruwalla, as applied to **claims 1** above, and further in view of Obelode et al. (US Pat 4,935,642), hereinafter known as Obelode.

13. For **claims 6, 10, 16, 20 and 23**, Delvaux does not teach the summation of power. Daruwalla teaches transmission power is re-optimized after a failure [**col. 13 lines 40-55**]. The combination of Delvaux and Daruwalla do not teach the summation of power across the subscriber lines. Obelode teaches the summation of power limitation absent from the teachings of Delvaux and Daruwalla by disclosing the distribution of electric power to functional units [**abstract**]. A preset limit value of the total power supply, power coming in from subscriber lines [**col. 3 lines 25-30**], needs to be less than the sum of the highest possible individual powers (**P10, P11, P12**) [**abstract**] (further comprising a control element configured to sum power from at least two of the subscriber lines). It would have been obvious to a person of ordinary skill in the art at the time of the invention to calculate the total power supply via summation of the subscriber lines in Delvaux's invention to make sure the subscriber lines supply enough power to allow a subscriber's station to operate.

Response to Arguments

14. Applicant's arguments with respect to **claims 1-23** have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey M. Rutkowski whose telephone number is (571) 270-1215. The examiner can normally be reached on Monday - Friday 7:30-5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

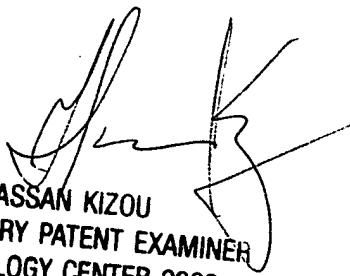
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Jeffrey M Rutkowski
Patent Examiner
12/22/2007

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